U.S. Department of the Interior
Bureau of Land Management
Little Snake Field Office
455 Emerson Street
Craig, CO 81625-1129

ENVIRONMENTAL ASSESSMENT

EA-NUMBER: DOI-BLM-CO-N010-2010-0009-EA

CASEFILE/PROJECT NUMBER/LEASE NUMBER: COC0002981 & COC0002913

PROJECT NAME: Sugarloaf Government Wells

LEGAL DESCRIPTION: Moffat County, Colorado

Sugarloaf Government Well #17: SENE Section 5, T11N, R101W, 6th P.M.
Sugarloaf Government Well #18: SESE Section 4, T11N, R101W, 6th P.M.

APPLICANT: Wexpro Company

PLAN CONFORMANCE REVIEW: The proposed action is subject to the following plan:

Name of Plans: Little Snake Resource Management Plan and Record of Decision (ROD) approved on April 26, 1989; and the Colorado Oil and Gas Leasing & Development Environmental Impact Statement (EIS) and the ROD signed on November 5, 1991.

Remarks: The proposed two Sugarloaf Government wells would be located within Management Unit 2 (Little Snake Resource Management Plan). One of the objectives of Management Unit 2 is to provide for the development of the oil and gas resource. The development of other resource uses/values within this unit is consistent with the management objectives for oil, gas, and forest resources.

The proposed action was reviewed for conformance with this plan (43 CFR 1610.5, BLM 1617.3). The proposed action is in conformance with the objectives for this management unit.

NEED FOR PROPOSED ACTION: To provide for the development of oil and gas resources and to supply energy resources to the American public.

PUBLIC SCOPING PROCESS: The Notices of Staking (NOSs) have been posted in the public room of the Little Snake Field Office for a 30-day public review period beginning

September 23, 2009 when the NOSs were received, and may be viewed during regular business hours (7:45 a.m. to 4:30 p.m.), Monday through Friday, except holidays.

DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES: The proposed action would be to approve two Applications for Permit to Drill (APDs) submitted by Wexpro Company. Wexpro Company proposes to drill two gas wells on BLM administered land located in the Sugarloaf Field in T11N, R101W. Two APDs have been filed with the LSFO for the Sugarloaf Government Well #17 and Sugarloaf Government Well #18. The APDs include drilling and surface use plans that cover mitigation of impacts to vegetation, soil, surface water, and other resources. Mitigation not incorporated by Wexpro Company in the drilling and surface use plan would be attached by the BLM as Conditions of Approval to an approved APD.

The proposed wells are located approximately 60 miles south of Rock Springs, Wyoming. Construction work is planned to start during the winter of 2010 and the estimated duration of construction and drilling for the well is 45 days. A short access road would be constructed for each of the wells. 1,330 feet of new access road would be constructed resulting in new surface disturbance of 1.0 acre. All road construction would be on lease and on BLM surface and would not require a federal right-of-way.

The proposed well pads would be cleared of all vegetation and leveled for drilling. Topsoil and native vegetation would be stockpiled for use in reclamation. Approximately 9.0 acres would be disturbed for construction of the both well pads. This would include the 350' by 400' well pad, the topsoil, and subsoil piles. A reserve pit would be constructed on each well pad to hold drill mud and cuttings. If the well is a producer, cut portions of the well site would be backfilled and unused portions of the well site would be stabilized and re-vegetated. If the gas well proves unproductive, it would be properly plugged and the entire well pad and access road would be reclaimed.

Wexpro Company did not include plans for a gas sales pipeline with the APDs. Total surface disturbance for the proposed action would be 10.0 acres.

NO ACTION ALTERNATIVE: The "no action" alternative is that the well would not be permitted and therefore the well would not be drilled. Wexpro Company holds a valid and current oil and gas lease for the area where the proposed Powder Wash Well would be located. Under leasing contracts, the BLM has an obligation to allow mineral development if the environmental consequences are not irreversible or too severe. The APD process is designed to overcome the no action situation of not accepting the APD through the mitigation of predicted environmental consequences. Since the proposed action is consistent with the ROD and the Oil and Gas Leasing EIS the no action alternative will not be analyzed further in this EA.

AFFECTED ENVIRONMENT/ENVIRONMENTAL CONSEQUENCES/MITIGATION MEASURES

CRITICAL RESOURCES

AIR QUALITY

Affected Environment: There are no special designation air sheds or non-attainment areas nearby that would be affected by the proposed action.

Environmental Consequences: Short term, local impacts to air quality from dust would result during and after well pad construction. Drilling operations produce air emissions such as exhaust from diesel engines that power drilling equipment. Air pollutants could include nitrogen oxides, particulates, ozone, volatile organic compounds, fugitive natural gas, and carbon monoxide. Gas flaring reduces the health and safety risks in the vicinity of the well by burning combustible and poisonous gases like methane and hydrogen sulfide.

Mitigative Measures: None.

Name of specialist and date: Shawn Wiser 10/26/09

AREA OF CRITICAL ENVIRONMENTAL CONCERN

Affected Environment: Not Present.

Environmental Consequences: Not Applicable.

Mitigative Measures: Not Applicable.

Name of specialist and date: Gina Robison 10/26/09

CULTURAL RESOURCES

Affected Environment: Cultural resources, in this region of Colorado, range from late Paleo-Indian to Historic. For a general understanding of the cultural resources in this area of Colorado, see *An Overview of Prehistoric Cultural Resources, Little Snake Resource Area, Northwestern Colorado*, Bureau of Land Management Colorado, Cultural Resources Series, Number 20, *An Isolated Empire, A History of Northwestern Colorado*, Bureau of Land Management Colorado, Cultural Resource Series, Number 2 and *Colorado Prehistory: A Context for the Northern Colorado River Basin*, Colorado Council of Professional Archaeologists.

Environmental Consequences: The proposed project, Sugar Loaf Government #17 and #18, have undergone a Class III cultural resource survey:

Darlington, David
2009 Class III Cultural Resource Inventory for the Wexpro Company Sugar Loaf Government #18 Well Pad and Access Road (BLM #12.40.09)
2009 Class III Cultural Resource Inventory for the Wexpro Company Sugar Loaf #17 Well Pad and Access Road (BLM #12.39.09)

The survey identified no eligible to the National Register of Historic Places cultural resources. The proposed project may proceed as described with the following mitigative measures in place.

Mitigative Measures:
The following standard stipulations apply for this project:

1. The operator is responsible for informing all persons who are associated with the operations that they will be subject to prosecution for knowingly disturbing historic or archaeological sites, or for collecting artifacts. If historic or archaeological materials are encountered or uncovered during any project activities, the operator is to immediately stop activities in the immediate vicinity of the find and immediately contact the authorized officer (AO) at (970) 826-5000. Within five working days, the AO will inform the operator as to:

- Whether the materials appear eligible for the National Register of Historic Places;
- The mitigation measures the operator will likely have to undertake before the identified area can be used for project activities again; and
- Pursuant to 43 CFR 10.4(g) (Federal Register Notice, Monday, December 4, 1995, Vol. 60, No. 232) the holder of this authorization must notify the AO, by telephone at (970) 826-5000, and with written confirmation, immediately upon the discovery of human remains, funerary items, sacred objects, or objects of cultural patrimony. Further, pursuant to 43 CFR 10.4(c) and (d), you must stop activities in the vicinity of the discovery and protect it for 30 days or until notified to proceed by the authorized officer.

2. If the operator wishes, at any time, to relocate activities to avoid the expense of mitigation and/or the delays associated with this process, the AO will assume responsibility for whatever recordation and stabilization of the exposed materials may be required. Otherwise, the operator will be responsible for mitigation costs. The AO will provide technical and procedural guidelines for the conduct of mitigation. Upon verification from the AO that the required mitigation has been completed, the operator will then be allowed to resume construction.

Name of specialist and date: Robyn Watkins Morris 11/03/09

ENVIRONMENTAL JUSTICE

Affected Environment: The proposed action would be located in an area of isolated dwellings. Oil and gas development and ranching are the primary economic activities.

Environmental Consequences: The project area would be relatively isolated from population centers, so no populations would be affected by physical or socioeconomic impacts of either alternative. The proposed action would not directly affect the social, cultural or economic well-being and health of Native American, minority or low-income populations.

Mitigative Measures: None.

Name of specialist and date: Louise McMinn 10/27/09

FLOOD PLAINS

Affected Environment: Active floodplains and flood prone zones would be avoided.

Environmental Consequences: No threat to human safety, life, welfare, or property would result from the proposed action.

Mitigative Measures: None.

Name of specialist and date: Shawn Wiser 10/26/09

INVASIVE, NONNATIVE SPECIES

Affected Environment: Invasive species and noxious weeds occur within the affected area. Downy brome (cheatgrass), yellow alyssum, blue mustard and other annual weeds are common along roadsides and on other disturbed areas. Canada thistle and several species of biennial thistles are known to occur in this area. Halogeton has become a very noticeable problem in the affected area, as well as other areas in the western portion of Moffat County. Russian knapweed and hoary cress (whitetop) have been found in the vicinity of these projects. Other species of noxious weeds are not known to be a problem in this area, but they can always be introduced by vehicle traffic, livestock and wildlife. The BLM, Moffat County, livestock operators, pipeline companies and oil and gas operators have formed the Northwest Colorado Weed Partnership to collaborate their efforts on controlling weeds and finding the best integrated approaches to achieve these results.

Environmental Consequences: The surface disturbing activities and associated traffic involved with drilling this well, constructing the access road, and subsequent activities would create an environment and provide a mode of transport for invasive species and other noxious weeds to become established. Construction equipment and any other vehicles and equipment brought onto the site can introduce weed species. Wind, water, recreation vehicles, livestock and wildlife would also assist with the distribution of weed seed into the newly disturbed areas. The annual invasive weed species (yellow alyssum, blue mustard and other annual weeds) occur on adjacent rangelands and would occupy the disturbed areas; the bare soils and the lack of competition from a perennial plant community would allow these weed species to grow unchecked and can affect the establishment of seeded plant species. Halogeton is a noxious annual weed that would also occupy the disturbed areas, but this weed species would likely require intensive control with herbicides to prevent it from moving into adjacent rangelands. Establishment of perennial grasses and other seeded plants is expected to provide the necessary control of invasive annual weeds within 2 or 3 years. Additional seeding treatments of the disturbed areas may be required in subsequent years if initial seeding efforts have failed.

The perennial and biennial noxious weeds in the area are less frequently established on the uplands but some potential exists for their establishment in draws and swales or areas along the road that would collect additional water. The largest concern in the project area would be for these species to become established and not be detected, providing seed which can be moved onto adjacent rangelands. The operator would be required to control any invasive and/or noxious weeds that become established within the disturbed areas involved with drilling and operating the well.

Mitigation attached as Conditions of Approval to minimize disturbance and obtain successful reclamation of the disturbed areas, as well as weed control utilizing integrated practices, including herbicide applications would help to control the noxious weed species. All principles of Integrated Pest Management should be employed to control noxious and invasive weeds on public lands.

Mitigative Measures: None.

Name of specialist and date: Shawn Wiser 10/26/09

MIGRATORY BIRDS

Affected Environment: The Sugarloaf # 18 well provides potential nesting habitat for Brewer's sparrow and sage sparrow. Both species are listed on the USFWS 2008 Birds of Conservation Concern list.

Environmental Consequences: The proposed action would result in the long term loss of approximately 10 acres of nesting habitat for both Brewer's sparrow and sage sparrows. Timing restrictions intended to protect nesting greater sage-grouse would reduce impacts to both species but may not eliminate potential to impact active nest sites. There would be a low chance for take to occur as a result of the proposed action.

Mitigative Measures: None.

Name of specialist and date: Timothy Novotny 10/29/09

NATIVE AMERICAN RELIGIOUS CONCERNS

A letter was sent to the Eastern Shoshone, Uinta and Ouray Tribal Council, Southern Ute Tribal Council, Ute Mountain Ute Tribal Council on May 26, 2009. The letter listed the FY2010 projects that the BLM would notify them on and projects that would not require notification. A follow-up phone call was performed on July 26, 2009. No comments were received (letter on file at the Little Snake Field Office). This project requires no additional notification.

Name of specialist and date: Robyn Watkins Morris 11/03/09

PRIME & UNIQUE FARMLANDS

Affected Environment: Not Present.

Environmental Consequences: None.

Mitigative Measures: None.

Name of specialist and date: Shawn Wiser 10/26/09

T&E AND SENSITIVE ANIMALS

Affected Environment: The proposed wells would be located within the Green River Basin. The Green River Basin provides habitat for the Colorado pike minnow, humpback chub, bonytail, or razorback sucker, all four species are federally endangered species.

The area proposed for the Sugarloaf # 18 well currently provides suitable nesting habitat for greater sage-grouse, a BLM special status species.

Environmental Consequences: In May 2008, BLM prepared a Programmatic Biological Assessment (PBA) that addresses water depleting activities associated with BLM's fluid minerals program in the Colorado River Basin in Colorado. In response to BLM's PBA, the FWS issued a Programmatic Biological Opinion (PBO) (ES/GJ-6-CO-08-F-0006) on December 19, 2008, which determined that BLM water depletions from the Colorado River Basin are not likely to jeopardize the continued existence of the Colorado pike minnow, humpback chub, bonytail, or razorback sucker, and that BLM water depletions are not likely to destroy or adversely modify designated critical habitat.

A Recovery Implementation Program for Endangered Fish Species in the Upper Colorado River Basin was initiated in January 1988. The Recovery Program serves as the reasonable and prudent alternative to avoid jeopardy and provide recovery to the endangered fishes by depletions from the Colorado River Basin. The PBO addresses water depletions associated with fluid minerals development on BLM lands, including water used for well drilling, hydrostatic testing of pipelines, and dust abatement on roads. The PBO includes reasonable and prudent alternatives developed by the FWS which allow BLM to authorize oil and gas wells that result in water depletion while avoiding the likelihood of jeopardy to the endangered fishes and avoiding destruction or adverse modification of their critical habitat. As a reasonable and prudent alternative in the PBO, FWS authorized BLM to solicit a one-time contribution to the Recovery Implementation Program for Endangered Fish Species in the Upper Colorado River Basin (Recovery Program) in the amount equal to the average annual acre-feet depleted by fluid minerals activities on BLM lands.

This project has been entered into the Little Snake Field Office fluid minerals water depletion log which will be submitted to the Colorado State Office at the end of the Fiscal Year.

The development of the Sugarloaf # 18 well could have a negative impact on greater sage-grouse. If drilling activities were to take place during the breeding or nesting season (March 1 to June 30), impacts to sage grouse using this habitat would be expected. Impacts to grouse species from oil and gas development are discussed in the Colorado Oil and Gas EIS (1991). Impacts include, but are not limited to, displacement into less suitable habitat, nest abandonment, destruction of nests and loss of habitat. Other impacts, such as habitat fragmentation and the spread of exotic plants can also degrade sage grouse habitat (Connelly et al. 2004). Noise and increased human activity related to drilling can disrupt breeding and nesting (Connelly et al. 2004). Holloran and Anderson (2004) found a higher annual decline in male lek attendance at leks within 3.2km from drilling activity. To prevent significant impacts to sage grouse species, construction and drilling activities associated with the proposed access roads, pipelines and well pads should not be permitted from March 1 to June 30. This timing limitation would prevent accidental nest destruction, nest and lek abandonment and displacement into less suitable habitat. In order to prevent disturbing breeding greater sage-grouse during their breeding season, no nonemergency traffic should use this road between 8 PM and 10 AM.

Bureau of Land Management. 1991. Colorado Oil and Gas Leasing and Development. Final Environmental Impact Statement. U.S. Dept. of Interior.

Connelly, J.W., S.T. Knick, M.A. Schroeder and S.J. Stiver. 2004. Conservation Assessment of Greater Sage-grouse and Sagebrush Habitats. Western Association of Fish and Wildlife Agencies. Unpublished Report. Cheyenne, Wyoming.

Holloran, M.J., and S.H. Anderson. 2004. Sage-grouse response to natural gas filed development in northwestern Wyoming. Page 16 in Proceedings of the 24th Meeting of the Western Agencies Sage and Columbian Sharp-tailed Grouse Technical Committee. Wenatchee, Washington (Abstract).

Mitigative Measures: CO-30 No surface disturbing activities between March 1 and June 30 in order to protect nesting greater sage-grouse. In order to prevent disturbing breeding greater sage-grouse during their breeding season, no nonemergency traffic should use this road between 8 PM and 10 AM.

This project has been entered into the Little Snake Field Office fluid minerals water depletion log which will be submitted to the Colorado State Office at the end of the Fiscal Year.

Name of specialist and date: Timothy Novotny 10/29/09

T&E AND SENSITIVE PLANTS

Affected Environment: There are no federally listed threatened or endangered or BLM sensitive plant species present within or in the vicinity of either of the proposed well.

Environmental Consequences: None.

Mitigative Measures: None.

Name of specialist and date: Hunter Seim 10/28/09

WASTES, HAZARDOUS OR SOLID

Affected Environment: If a release does occur, the environment affected would be dependent on the nature and volume of material released. If there are no releases, there would be no impact on the environment.

Environmental Consequences: Consequences would be dependent on the volume and nature of the material released. In most every situation involving hazardous materials, there are ways to remediate the area that has been contaminated. Short-term consequences would occur, but they can be remedied, and long-term impacts would be minimal.

Mitigative Measures: None.

Name of specialist and date: Shawn Wiser 10/26/09

WATER QUALITY – GROUND

Affected Environment: Potable water is possible in this area. The nearest water well is 4.25 miles to the southwest and was drilled to a depth of 370'. The well is currently abandoned.

Environmental Consequences: With the use of proper construction practices, drilling practices, and with best management practices no significant adverse impact to groundwater aquifers and quality would be anticipated to result from the proposed action. A geologic and engineering review was performed on the 8-point drilling plans to ensure that the cementing and casing programs adequately protect the downhole resources.

Mitigative Measures: Provide BLM Little Snake Field Office fluids geologist with a cement bond log immediately upon running for possible remediation.

Name of specialist and date: Marty O'Mara 10/28/09

WATER QUALITY – SURFACE

Affected Environment: The proposed wells would be constructed near G Wash. Any runoff from the well pad or access road would drain into G Wash. All stream segments near the well pad locations are presently supporting classified beneficial uses. No impaired stream segments occur in the vicinity of the proposed action.

Environmental Consequences: Runoff water from the well site would drain towards G Wash, which is an ephemeral tributary to the Canyon Creek. Increased sedimentation to G Wash during spring runoff or from high intensity rainstorms is the most likely environmental consequence from the proposed action. Although some sediment may be transported off site and eventually reach perennial waters, the mitigation provided in the Surface Use Plan and the Conditions of Approval would reduce the potential impacts caused by surface runoff.

Mitigative Measures: None.

Name of specialist and date: Shawn Wiser 10/26/09

WETLANDS/RIPARIAN ZONES

Affected Environment: There are no wetlands or riparian zones present within the proposed project area.

Environmental Consequences: There would be no impacts to wetlands or riparian zones as a result of the Proposed Action.

Mitigative Measures: None.

Name of specialist and date: Shawn Wiser 10/26/09

WILD & SCENIC RIVERS

Affected Environment: Not Present.

Environmental Consequences: Not Applicable.

Mitigative Measures: Not Applicable.

Name of specialist and date: Gina Robison 10/26/09

WSAs, WILDERNESS CHARACTERISTICS

Affected Environment: Not Present.

Environmental Consequences: Not Applicable.

Mitigative Measures: Not Applicable.

Name of specialist and date: Gina Robison 10/26/09

NON-CRITICAL ELEMENTS

FLUID MINERALS

Affected Environment: Both proposed wells would be in favorability zone 4 (highest for oil and gas potential). These wells would penetrate the Wasatch, Fort Union, and Almond, Formations.

Environmental Consequences: The casing and cementing program would be adequate to protect all of the resources identified above. All coal seams and fresh water zones would also be protected. The BOP system would be adequately sized. All of these zones would be cased off.

Mitigative Measures: None.

Name of specialist and date: Marty O'Mara 10/28/09

PALEONTOLOGY

Affected Environment: The geologic formation at the surface is the Tertiary age Niland Tongue Member of the Wasatch Formation (Twn), a soft and moderately resistant, tan, light- to dark-gray sandstone, shale, siltstone, oil shale, carbonaceous shale, and coal. This formation has been classified as a Class Ia formation for the potential occurrence of scientifically significant fossils.

Environmental Consequences: Scientifically significant fossils are found abundantly within this formation (Armstrong & Wolney, 1989). The potential for discovery of significant fossils on this location is considered to be high. If any such fossils are located here, construction activities could damage the fossils and the information that could have been gained from them would be lost. The significance of this impact would depend upon the significance of the fossil. The proposed action could also constitute a beneficial impact to paleontological resources by increasing the chances for discovery of scientifically significant fossils.

Mitigative Measures: Ceasing operations and notifying the Field Office Manager immediately upon discovery of a fossil during construction activities can effectively mitigate this impact. An assessment of the significance would be made and a plan to retrieve the fossil or the information from the fossil is developed.

Name of specialist and date: Marty O'Mara 10/28/09

SOILS

Affected Environment: The proposed Sugarloaf Government Well #17 would be located within the Haterton-Piezon soil complex. These very deep soils are well drained and found

on hills and plateaus. Slopes within this unit average 3 to 12 percent. Theses soils formed from residuum derived from siltstone and fine grained sandstone. Runoff is moderately low to high and the hazard of wind and water erosion is moderate to high.

The proposed Sugarloaf Government Well #18 would be located within the Langspring sandy loam soil mapping unit. These very deep soils are well drained and found on plateaus. Slopes within this unit average 3 to 12 percent. Theses soils formed from loess over residuum derived from sandstone. Runoff would be medium and the hazard of wind and water erosion is moderate to high.

Environmental Consequences: The construction and operation of the two Sugarloaf Government Wells would affect soils within and immediately adjacent to the proposed area of disturbance. Increased soil erosion from wind and water would occur during construction of the well pads and access roads. Erosion would continue throughout the operational life of the wells. Loss of topsoil, soil compaction, and possible increases in sediment loads to drainages are impacts most likely to occur.

Vegetation and soil would be removed from approximately 10.0 acres of land. Soil productivity would decline due to reduced soil microbial activity, impaired water infiltration, mixing of soil horizons, top soil loss, and introduction of weeds. Soil loss from construction would be greatest shortly after project start and would decrease in time as a result of stabilization through revegetation and reclamation of disturbed areas. Soil erosion would be reduced to an acceptable level with the mitigation described in the Surface Use Plan and Conditions of Approval in the approved APD. This mitigation would reduce the potential to have excessive sediments and salts in runoff water from the well sites.

Mitigative Measures: Additional mitigative measures would be employed to prevent or reduce accelerated erosion if it begins to occur within or on constructed drainage and diversion ditches or surface drainages affected by the road or well pad.

Name of specialist and date: Shawn Wiser 10/26/09

UPLAND VEGETATION

Affected Environment:

Sugarloaf #17

This proposed well would be located in a salt desert plant community. Dominant plants present include Nuttall's saltbush (*Atriplex nuttallii*), buckwheat (*Eriogonum* spp.), budsage (*Artemisia spicatum*), squirreltail (*Sitanion hystrix*), and Sandberg bluegrass (*Poa sandbergii*). The area contains small patches of Wyoming big sagebrush (*Artemisia tridentata*) and greasewood (*Sarcobatus vermiculatus*). Common non-native species on the site are halogeton (*Halogeton glomeratus*), belvedere summercypress (*Kochia scoparia*), and Russian thistle (*Salsola kali*). Belvedere summercypress and Russian thistle are present primarily adjacent to disturbances, but halogeton is present throughout the area.

Sugarloaf #18

This proposed well would be located in a sagebrush-grass plant community. Dominant plants present include Wyoming big sagebrush, Nuttall's saltbush, shadscale (*Atriplex confertifolia*), green rabbitbrush (*Chrysothamnus viscidiflorus*), Hood's phlox (*Phlox hoodii*), squirreltail, Indian ricegrass (*Oryzopsis hymenoides*), and Sandberg bluegrass. Non-native species are present, but in very low abundance. Non-natives present are halogeton, tumble mustard (*Descurainia pinnata*), and cheatgrass (*Bromus tectorum*).

Environmental Consequences: The proposed action would remove approximately five acres of native vegetation for each well. These removals would be minor in the larger plant community. All or part of the areas disturbed could be reclaimed in the short term if a well fails to produce, but if a well produces, portions of the total disturbance would be reclaimed as the drilling pad would be shrunk down after well completion. The developed access road would remain to the producing well. In the long term, after the life of the producing well has ended, all disturbance would be reseeded to native vegetation per the drilling and surface use plans. As long as weeds are controlled and all disturbed areas are reseeded to prescribed mixes of native plant species and establishment is ensured as required, the negative impacts to the native plant community would be effectively mitigated.

Mitigative Measures: None.

Name of specialist and date: Hunter Seim 10/28/09

AQUATIC WILDLIFE

Affected Environment: There is no habitat present for aquatic wildlife at either proposed well site.

Environmental Consequences: None.

Mitigative Measures: None.

Name of specialist and date: Timothy Novotny 10/29/09

WILDLIFE, TERRESTRIAL

Affected Environment: The proposed well locations would be within habitat for pronghorn antelope, mule deer and elk. These wells would be located in pronghorn antelope severe winter habitat. The project areas provide suitable habitat for a variety of small mammals, songbirds and reptiles.

Environmental Consequences: Approximately 10 acres of wildlife habitat would be disturbed as a result of construction and drilling of these wells. This includes disturbances for access road. Impacts to wildlife species from oil and gas development are discussed in

the Colorado Oil and Gas EIS (1991). Impacts include, but are not limited to, displacement into less suitable habitat, increased stress and loss of habitat. Surrounding habitat in undisturbed areas should be capable of supporting any displaced wildlife. Once construction and drilling have been completed, most wildlife would be able to reoccupy areas surrounding well sites. If this well produces, some wildlife may choose to avoid the well location due to human activity.

Mitigative Measures: No surface disturbing activities between December 1 and April 30 in order to protect wintering pronghorn antelope. This timing restriction applies to the Sugarloaf # 18 well only.

Name of specialist and date: Timothy Novotny 10/29/09

OTHER NON-CRITICAL ELEMENTS:

Non-Critical Element	NA or Not Present	Applicable or Present, No Impact	Applicable & Present and Brought Forward for Analysis
Fluid Minerals			See Fluid Minerals
Forest Management	SW 10/26/09		
Hydrology/Ground			See Water Quality/Ground
Hydrology/Surface			See Water Quality/Surface
Paleontology			See Paleontology
Range Management			See Range Mgmt
Realty Authorizations		LM 10/27/09	
Recreation/Travel Mgmt		GMR 10/26/09	
Socio-Economics		LM 10/27/09	
Solid Minerals		EMO 11/02/09	
Visual Resources		GMR 10/26/09	
Wild Horse & Burro Mgmt	SW 10/26/09		

CUMULATIVE IMPACTS SUMMARY:

Cumulative impacts may result from the development of the two Sugarloaf Government Wells when added to non-project impacts that result from past, present, and reasonably foreseeable future actions. The potential exists for future oil and gas development throughout the Sugarloaf Field. Currently numerous producing wells exist within a one-mile radius of the proposed wells. Other past or existing actions near the project area that have influence on the landscape are wildfire, recreation, hunting, grazing, and ranching activities.

Surface disturbance associated with oil and gas activity would increase the potential for erosion and sedimentation. Displacement of hunters and recreationists during the short-term construction and drilling periods would occur. Contrasts in line, form, color, and texture from development would impact the visual qualities on the landscape.

Cumulative impacts to the plant communities within the gas lease and adjacent areas include an incremental reduction of continuity in the plant communities in terms of acreages that remain undisturbed. Loss of continuity results in smaller and smaller areas of undisturbed native vegetation and the potential for loss of integrity within the larger plant community. Fragmented plant communities can lose resilience to natural and man-made disturbance due to isolation of areas from seed sources necessary for proper age class distribution of plants, and subsequently, a greater opportunity for stressors such as drought to have a more severe impact on the plant community as a whole. The increased disturbance also makes native plant communities more susceptible to invasion by annual weeds as vectors for increasing weeds. Even with weed control measures applied, the potential for weeds to move further into undisturbed remnant areas increases as these remnants become smaller and more isolated from larger undisturbed areas.

Cumulative impacts to the livestock grazing operations in the area are also increased through the proposed action. The grazing allotment in which this well is proposed is primarily a winter sheep allotment. The growth in wells, roads, and human activity has reduced the availability of forage in this area far beyond direct impacts caused by construction. Halogeton which has increased among the new roads and well pads is toxic to sheep. The resulting impact to grazing activities permitted in the area is a loss of available Animal Unit Months (AUMs), i.e. a loss of the amount of livestock that the allotment can reasonably carry. Due to recent years of drought, the livestock operators have only lightly used these allotments, so direct impacts to grazing activities have not been fully felt.

Habitat fragmentation from well pad construction and the associated roads have likely decreased the nesting suitability for migratory birds in the Sugarloaf Field. Ingelfinger (2001) found that roads associated with oil and gas development have a negative impact on passerines bird species. Bird densities were reduced within 100m of each road. Due to the amount of new road construction and an increase in traffic on these roads, passerine populations in the area are likely decreasing.

The cumulative impacts of additional wells and roads in the Sugarloaf Field would continue to degrade habitat for the greater sage grouse. Fragmentation, mostly due to road construction, is an important factor contributing to a decrease in habitat quality. Disturbances such as higher traffic

volume and other human activities also contribute to degradation of habitat quality. However, as the area is not used for nesting, brood rearing, or wintering, these impacts would be less severe. Continued oil and gas development would lead to decreased sage grouse use of the habitat.

Although big game species are able to adapt to disturbances better than other wildlife, increased development would still have impacts to mule deer and antelope. Timing stipulations adequately protect big game species during critical times of the year; however, continued oil and gas development would lead to decreased use of the habitat due to increased human activity. A significant amount of vehicle traffic occurs with oil and gas development. Impacts to big game may be vehicle-animal collisions, as these are a major cause of mortality for big game species.

References:

Ingelfinger, F. 2001. The Effects of Natural Gas Development on Sagebrush Steppe Passerines in Sublette County, Wyoming. University of Wyoming, Laramie, WY.

STANDARDS:

PLANT AND ANIMAL COMMUNITY (animal) STANDARD: The project area provides healthy productive wildlife habitat for a variety of species including big game, small mammals, song birds and reptiles. The development of these proposed wells would result in a loss of approximately 10 acres of habitat. If the wells produce, a larger area surrounding the well pads would likely be avoided by wildlife. Surrounding habitat is sufficient to ensure that populations are not negatively impacted by this project. This standard is currently being met and would continue to be met in the future.

Name of specialist and date: Timothy Novotny 10/29/09

SPECIAL STATUS, THREATENED AND ENDANGERED SPECIES (animal) STANDARD: The FWS issued a Programmatic Biological Opinion (PBO)(ES/GJ-6-CO-08-F-0006) on December 19, 2008, which determined that BLM water depletions from the Colorado River Basin are not likely to jeopardize the continued existence of the Colorado pikeminnow, humpback chub, bonytail, or razorback sucker, and that BLM water depletions are not likely to destroy or adversely modify designated critical habitat.

This project has been entered into the Little Snake Field Office fluid minerals water depletion log which will be submitted to the Colorado State Office at the end of the Fiscal Year.

The Sugarloaf # 18 well site is within greater sage-grouse nesting habitat. Greater sage-grouse are a BLM special status species. If construction or drilling activities were conducted during the nesting season, it is likely that greater sage-grouse nesting success would decrease in the project area. Timing restrictions will ensure that breeding and nesting sage-grouse are protected from disturbances. The loss of six acres of nesting habitat is not likely to affect sage-grouse however; human activity associated with this development and production wells may preclude sage-grouse use of the area in the future.

This standard is currently being met. This project alone would not preclude this standard from being met.

Name of specialist and date: Timothy Novotny 10/29/09

PLANT AND ANIMAL COMMUNITY (plant) STANDARD: The Proposed Action would completely remove approximately five acres of native vegetation for each well. As long as required weed control and reclamation practices are followed, the Proposed Action would meet this standard as negative impacts to the larger plant community would be minimized and the majority of the disturbances would be essentially temporary.

Name of specialist and date: Hunter Seim 10/28/09

SPECIAL STATUS, THREATENED AND ENDANGERED SPECIES (plant) STANDARD: There are no federally listed threatened or endangered or BLM sensitive plant species present within or in the vicinity of either of the proposed wells. This standard does not apply.

Name of specialist and date: Hunter Seim 10/28/09

RIPARIAN SYSTEMS STANDARD: There are no wetlands or riparian zones present within the project area. This standard does not apply.

Name of specialist and date: Shawn Wiser 10/26/09

WATER QUALITY STANDARD: The proposed action would meet the public land health standard for water quality. Interim reclamation of the unused area on the well pads would be completed to minimize sheet and rill erosion from the well sites. When the well pads are no longer needed for production operations, the disturbed well pads and access roads would be reclaimed to approximate original contours, topsoil would be redistributed, and adapted plant species would be reseeded. These Best Management Practices would help to reduce accelerated erosion of the sites. No stream segments near this project are listed as impaired.

Name of specialist and date: Shawn Wiser 10/26/09

UPLAND SOILS STANDARD: The proposed action would not meet the upland soil standard for land health, but it is not expected to while the well locations and access roads are used for operations. The well pad sites and access roads would not exhibit the characteristics of a healthy soil. Several Best Management Practices have been designed into the project or are attached as mitigating measures that would reduce impacts to and conserve soil materials. Upland soil health would return to the well pads and access roads disturbances after reclamation practices and well abandonments have been successfully achieved.

Name of specialist and date: Shawn Wiser 10/26/09

PERSONS/AGENCIES CONSULTED: Uintah and Ouray Tribal Council, Colorado Native American Commission, Colorado State Historic Preservation Office.

FINDING OF NO SIGNIFICANT IMPACT (FONSI)
DOI-BLM-CO-N010-2010-0009-EA

Based on the analysis of potential environmental impacts contained in the EA and all other available information, I have determined that the proposal and the alternatives analyzed do not constitute a major Federal action that would adversely impact the quality of the human environment. Therefore, an EIS is unnecessary and will not be prepared. This determination is based on the following factors:

1. Beneficial, adverse, direct, indirect, and cumulative environmental impacts have been disclosed in the EA. Analysis indicated no significant impacts on society as a whole, the affected region, the affected interests, or the locality. The physical and biological effects are limited to the Little Snake Resource Area and adjacent land.

2. Public health and safety would not be adversely impacted. There are no known or anticipated concerns with project waste or hazardous materials.

3. There would be no adverse impacts to regional or local air quality, prime or unique farmlands, known paleontological resources on public land within the area, wetlands, floodplain, areas with unique characteristics, ecologically critical areas, or designated Areas of Critical Environmental Concern.

4. There are no highly controversial effects on the environment.

5. There are no effects that are highly uncertain or involve unique or unknown risk. Sufficient information on risk is available based on information in the EA and other past actions of a similar nature.

6. This alternative does not set a precedent for other actions that may be implemented in the future to meet the goals and objectives of adopted Federal, State, or local natural resource related plans, policies, or programs.

7. No cumulative impacts related to other actions that would have a significant adverse impact were identified or are anticipated.

8. Based on previous and ongoing cultural surveys, and through mitigation by avoidance, no adverse impacts to cultural resources were identified or anticipated. There are no known American Indian religious concerns or persons or groups who might be disproportionately and adversely affected as anticipated by the Environmental Justice Policy.

9. No adverse impacts to any threatened or endangered species or their habitat that was determined to be critical under the Endangered Species Act were identified. If, at a future time, there could be the potential for adverse impacts, treatments would be modified or mitigated not to have an adverse effect or new analysis would be conducted.

10. This alternative is in compliance with relevant Federal, State, and local laws, regulations, and requirements for the protection of the environment.

DECISION AND RATIONALE:
I have determined that approving this APD is in conformance with the approved land use plan. It is my decision to implement the project with the mitigation measures provided in the Application for Permit to Drill and the Conditions of Approval. The project will be monitored as stated in the Compliance Plan outlined below.

MITIGATION MEASURES: The mitigation measures for this project are found in the file room of the Little Snake Field Office. The APD 12-point surface use plan, well location maps, and the Conditions of Approval are found in the well case file labeled COC002981, Sugarloaf Government Well #17 and COC002913, Sugarloaf Government Well #18.

COMPLIANCE PLAN(S):

Compliance Schedule
Compliance will be conducted during the construction phase and drilling phase to insure that all terms and conditions specified in the lease and the approved APDs are followed. In the event a producing well is established, periodic inspections as identified through the Inspection and Enforcement Strategy and independent well observations will be conducted. File inspections will include a review of all required reports and the Monthly Report of Operations will be evaluated for accuracy.

Monitoring Plan
The well locations and access roads will be monitored during the term of the lease for compliance with pertinent Regulations, Onshore Orders, Notices to Lessees, or subsequent COAs until final abandonment is granted; monitoring will help determine the effectiveness of mitigation and document the need for additional mitigative measures.

Assignment of Responsibility
Responsibility for implementation of the compliance schedule and monitoring plan will be assigned to the Fluid Mineral staff in the Little Snake Field Office. The primary inspector will be the Petroleum Engineering Technician, but the Petroleum Engineer, Natural Resource Specialist, Realty Specialist, and Land Law Examiner will also be involved.

SIGNATURE OF PREPARER:

DATE SIGNED:

SIGNATURE OF ENVIRONMENTAL REVIEWER:

DATE SIGNED:

SIGNATURE OF AUTHORIZED OFFICIAL:

DATE SIGNED: